

In the *Phallus impudicus*, the type of the genus *Phallus*, there exists, as in the preceding genus, a gelatinous volva, inclosed in two thin membranes, hymenial cavities whose agglomeration forms a mucilaginous mass, and lastly a central axis, which serves, like the branches of the *Clathrus*, to support the hymenium.

The analogy is perfect, and to dilate further on the structure of *Phallus* would merely be to repeat what we have already said.

The organs of fructification deserve however particular notice. The hymenial cavities do not at all differ from those of *Clathrus*, but they are furnished with spores at least twice as large; these spores are grouped in fours, fives and sixes, and are undoubtedly supported on basidia, which it is very difficult to isolate and to see distinctly, but the existence of which is evident. The fructiferous substance undergoes the same modifications as in *Clathrus*; at first adhesive, it afterwards becomes mucilaginous, and in the end deliquesces, forming a liquid of a very disagreeable odour.

An identical organization already observed in the genus *Cynophallus* ought necessarily to exist in the rest of the *Phalloideæ* and of the *Clathraceæ*; it doubtless extends also to the *Lysuroideæ* and to the genus *Battarea*, which forms a point of transition with the *Trichogastrea*.

We hope that further observations will confirm these hypotheses, and throw some light on the structure, so imperfectly known, of the mushrooms belonging to these various groups.

XXXVIII.—*Journey through Java, descriptive of its Topography and Natural History.* By Dr. FR. JUNGHUHN*.

THE present work, by the well-known botanist Dr. Junghuhn, furnishes us with the results of the author's great labours in natural history in Java. They are the more interesting, as his descriptions (as might be expected from a botanist) relate especially to vegetation. They are also the more important to the phytographer, as the author has shown himself capable of connecting intimately these descriptions with the other natural features of the country; and thus to present to our minds picturesquely all the details of natural history, and at the same time in a strictly scientific manner. We may also infer, from the ability of the author, that his geognostical and physical investigations possess the greatest accuracy; from which circumstance, we have in this work a valuable mass of observations in natural history, corresponding to the magnificence of the natural features of Java.

It is our intention to give a sketch of this journey as far as our limits will allow, which will be the more easy, as the author characterizes episodically every distinct subject in all its relations to natural history.

* From the *Botanische Zeitung*, Aug. 29th, 1845.

Sketch of the environs of Weltevreden and Batavia lying adjacent on the north.

Two leagues distant from the sea-coast, these two places lie on a plain scarcely 50 or 60 feet high, covered with the richest vegetation, which appears like one large continuous forest when viewed from a height. This large wood consists of a varied mixture of fruit-trees, under whose thick foliage are concealed the buildings and kampongs. If any one expects to see a wilderness or a primitive forest, he finds himself deceived when he enters it and goes amongst the wide-spreading stems of lofty fruit-trees; one while hemmed in by bushes of the pisang or the sirip plantations (*Piper Betle*), which creep up the slender stems of the *Hyperanthera Moringa*, W., or by coffee-bushes and shrubs of *Ananas* (*Bromelia Ananas*).

Of these trees the most plentiful are *Garcinia Mangostana*, *Mangifera indica*, and other species of this genus, *Artocarpus incisa* and *integrifolia*, *Nephelium lappaceum*, numerous species of *Citrus*, *Averrhoa Bilimbi*, *Morinda citrifolia*, many *Eugenia* (*Jambos*), *Anona muricata* and *tuberculata*, *Persea gratissima*, *Lansium domesticum*, *Durio Zibethinus*, *Carica Papaya*, and innumerable cocoa-palms, which are partly scattered among the former, and partly form groups in small copses. More scattered among the rest are *Areca communis* and the Areng-palms (*Gomutus Rumphii*), the stem of which is covered by numerous ferns. In the neighbourhood of Weltevreden are also found *Tamarindus indica*, *Citrus decumana* and *Canarium commune*, which form lofty and noble alleys; on many roads are planted the *Morus indica* and *Hibiscus tiliaceus*, a small tree, whose large yellow flowers captivate the eye. The *Musa paradisiaca* and bamboo bushes (*Bambusa arundinacea*) may also from their dimensions be reckoned trees. The latter is especially found at the entrance to villages in large clusters and on the banks of rivers, to which it imparts a peculiar physiognomy, uniting the expression of beauty and lightness with strength. Its slender stalks, as thick as an arm, shoot up to a height of 40 to 50 feet, and interlace themselves into a foliage which forming a vaulted top gives the most agreeable shade. On the sides of the road leading toward Buitenzorg (as on many other roads in Java) is planted the *Bixa Orellana*, small round trees covered with red hairy fruit, which at a distance give it the appearance of rose-bushes in bloom.

The *Casuarina equisetifolia* is an ornamental garden-plant; its slender branches are divided like our fir-trees, and here and there are seen upon the tall rounded foliage the beautiful lilac-coloured blossoms of the *Lagerstræmia Regina*, Rxb.: species of *Ixora*, *Draæna terminalis*, *Jatropha multifida*, &c. adorn the sides of the road.

The whole appearance of this luxuriance of thick groups of trees affords an enjoyment which can better be expressed by the pencil than the pen. Let the reader transport himself for example to the shade of a high vaulted *Mangifera*, drink in the perfume which the flowers of the *Uvaria odoratissima*, the *Michelia Champaca*, or the *Plumeria obtusa*, spread around; and let him cast a glance upon the

wood which rises on the other side of the small river :—A young bamboo-bush, crisp and round, borders the water's edge ; then are seen upon a dark ground the light green of the gigantic Pisang-leaves, which rise up from their spongy stems and are slowly moved by the gentle breezes. Behind these the view is closed by the interwoven foliage of the trees, among which are distinguished by their brilliant foliage numerous species of *Citrus*,—the *Artocarpus incisa* by its large serrated leaves, and *Bombax pentandrum* by its horizontal branches ; among these rises up the bluish green foliage of the Areng-palm ; but all these trees are surmounted by the crowns of the cocoa-palms, whose gray stems, covered with lichens, rise perpendicularly out of the dark arborescence, and majestically overtop with their lofty summits the rounded foliage of the other trees. Golden fruit, as large as gourds, glitter among their long feathery branches, which rustle gently in the wind.

In the woods and plantations of this kind there remain here and there small open spaces and irrigated rice-fields, lying in the lovely enameled fields of young grass ; here the *Pontederia vaginalis* unfolds its azure blossoms. The streets in the town and the arid grass-plots, which occur here and there among the houses, are overgrown with the weeds of species of *Sida* (*S. acuta*, *retusa*, *elongata*, &c.), by *Urena lobata*, by some Compositæ, also by species of *Mercurialis*, *Celosia*, *Achyranthes*, and by *Portulaca oleracea*, L. ; between which are here and there hidden upon sandy and stony places the small *Portulaca quadrifida*, C. In fertile spots, on the borders of the ditches, is found the *Heliotropium indicum*. The small bushes which above Weltevreden enliven by their green the margin of some rivulets, consist of species of *Psidium* and *Melastoma Malabathricum* ; with which are mingled the *Mussaenda glabra*, V., whose fiery yellow blossoms and milk-white yellow calycine bracts attract the eye of the traveller. [The author here only refers to those plants which characterize the physiognomy of the country and attract attention from their masses.] Woods, properly so called, are no longer found in the immediate environs of Batavia ; but we meet with them on the moist, inhospitable sea-shore (even at Anjol), stretching along a great portion of the north coast.

What the author says of *the occurrence of the Fungi in the tropics* (p. 99) is interesting : They appear under the tropics to be limited to no fixed season of the year. The difference between the temperature in the wet and dry half-year is very small, at least in the mountains, where also in the dry season frequent rains fall. Heat, the first impulse of production of all vegetable life, is therefore always present ; moisture of the ground, the second thing of importance which the formation of spongy plants requires, also obtains from year to year in these primæval forests, whose thick foliage is never penetrated by the sun's rays. The rich, brown soil, abounding in humus, is always soaked and loose and spongy ; the watery particles of the atmosphere, which are precipitated by the coolness at night, and the amount of the exhaled carbonated water, moisten with their dew-drops all the leaves, so that a person can scarcely go

into the wood in the middle of a dry day without being wetted through. Added to all this is the quantity of fallen branches, sticks and whole trunks of trees, which rot upon the ground, and the inside of which is frequently already converted into rich earth, even if their outer bark has been preserved as a thin and light fragile crust. Thus the outer conditions requisite for the growth and origin of the fungi (heat, moisture, and abundance of decaying organic substances) are always present in the tropical woods; and indeed we find these woods decorated with manifold forms of fungi throughout the whole year, without its being possible to observe at any particular time a more frequent occurrence, as in the autumn of the temperate zones. Even the individual species are limited to no time, and the occurrence of the same species is uninterruptedly continued. On the other hand, the fungi are not found in the tropics in such groups; they are less sociable than in our climate, where in autumn they principally enliven the woods. They here occur more scattered and isolated, although found at every period of the year; and it is the parasitic *Polypori*, which are especially numerous on the branches of the trees, that delight the eye by their brilliant colours. In central Europe the *Agarici terrestres* prevail, and determine the physiognomy of an autumnal wood.

[To be continued.]

PROCEEDINGS OF LEARNED SOCIETIES.

ZOOLOGICAL SOCIETY.

May 13, 1845.—William Yarrell, Esq., Vice-President, in the Chair.

“Descriptions of new species of Land Shells, from the collection of Hugh Cuming, Esq.,” by Dr. Louis Pfeiffer:—

1. *HELIX GRANDIS*, Pfr. *Hel. testá imperforatá, globoso-turbinatá, solidá, ponderosá, striatá, nigricanti-rufá, epidermide griseo-fuscescente fasciatim obductá; spirá conicá, apice pallidá; anfractibus 6 vix convexiusculis, ultimo spirá brevior, basi inflato, fortius striato; columellá verticali, brevi, subtortá; aperturá latè lunari, intus margaritacé; peristomate nigricante, latè expanso, margine basali incrassato, reflexo, cum columellari valde dilatato, albido angulum obtusum formante.*

Diam. 68; alt. 58 mill.

Found at Bangui, province of North Ilocos, island of Luzon, by H. Cuming, Esq.

2. *HELIX GMELINIANA*, Pfr. *Hel. testá imperforatá, globoso-depressá, solidá, irregulariter rugoso-malleatá, carinatá, nitidá, pallidè viridi, ad suturam et infra carinam albo-cingulatá; spirá subelevatá, apice obtusá, albidá; anfractibus 4½ vix convexiusculis, sensim accrescentibus, ultimo non descendente, basi planiusculá; aperturæ angulato-lunari; peristomate subincrassato, margine supero breviter expanso, antrorsum arcuato, basali reflexo, columellari declivi, dilatato, albo-callosa.*

Diam. 23; alt. 13 mill.

Found at Bayambong, island of Luzon, by H. Cuming, Esq.